number of patients with HCAIs. The most frequent infections were clinically defined pneumonia (30.9%) and bloodstream infections (20.1%). The most frequently isolated microorganism was *Pseudomonas aeruginosa*. **Conclusions:** The prevalence of HCAI was 12.2%. The most frequent HCAIs were pneumonia and bloodstream infection.

Funding: No
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s78–s79
doi:10.1017/ash.2021.154

Presentation Type:
Poster Presentation
Subject Category: Surveillance/Public Health
Multifacility Outbreak of NDM/OXA-23–Producing *Acinetobacter baumannii* in California, 2020–2021

Diana Holden; Tisha Mitsunaga; Denise Sanford; Tanya Fryer; June Nash; Emily Schneider; Rituparna Mukhopadhyay; Erin Epson and Matthew Sylvester

Background: NDM/OXA-23 carbapenemase-producing *Acinetobacter baumannii* isolates have been reported worldwide, but rarely in the United States. A California acute-care hospital (ACH) A identified 3 patients with pan-nonsusceptible *A. baumannii* during May–June 2020, prompting a public health investigation to prevent further transmission among the regional healthcare network. **Methods:** A clinical isolate was defined as NDM/OXA-23–producing *A. baumannii* from a patient at ACH A or B, or an epidemiologically linked patient identified through colonization screening during May 2020–January 2021. ACHs A and B are sentinel sites for carbapenem-resistant *A. baumannii* surveillance through the Antibiotic Resistance Laboratory Network (AR Lab Network), where isolates are tested for carbapenemase genes. The California Department of Public Health with 3 local health departments conducted an epidemiological investigation, contact tracing, colonization screening, and whole-genome sequencing (WGS). **Results:** In total, 11 cases were identified during May 2020–January 2021, including 3 cases at ACH A during May–June 2020, and 8 additional cases during November 2020–January 2021: 5 at ACH A, 1 at ACH B, and 2 at skilled nursing facility (SNF) A. Isolates from ACHs A and B were identified through testing at the AR Lab Network. Of the 11 patients (including the index patient), 4 had exposure at SNF A, where 2 cases were identified through colonization screening. Screening conducted at ACH A and 5 other long-term care facilities (LTCFs) identified no additional cases. WGS results for the first 8 cases identified showed 2–13 single-nucleotide polymorphism differences. Antibiotic resistance genes for all isolates sequenced included NDM-1 and OXA-23. On-site assessments related to a COVID-19 outbreak conducted at ACH A identified infection control gaps. **Conclusions:** Hospital participation in public health laboratory surveillance allows early detection of novel multidrug-resistant organisms (MDROs), which enabled outbreak identification and public health response. A high COVID-19 burden and related changes in infection control practices have been associated with MDRO transmission elsewhere in California. This factor might have contributed to spread at ACH A and hampered earlier screening efforts at SNF A, likely leading to undetected transmission. Extensive movement of positive patients among a regional healthcare network including at least 6 ACHs and 7 LTCFs likely contributed to the prolonged duration of this outbreak. This investigation highlights the importance of enhanced novel MDRO surveillance strategies coupled with strong infection prevention and control practices as important factors in identifying outbreaks and preventing further transmission in regional networks.

Funding: No
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s79
doi:10.1017/ash.2021.155

Presentation Type:
Poster Presentation
Subject Category: Surveillance/Public Health
Surveillance of Candidemia in Connecticut: An Epidemiological Comparison Between Two Periods

Johanna Gleason-Vergados; David Banach; Paula Clogher and James Meek

Background: Candidemia is the fourth most common bloodstream infection in hospitalized patients in the United States, with an attributable mortality rate between 30% and 50%. Understanding the epidemiology of candidemia is critical due to its prevalence and association with extended hospital stays, high treatment cost, and significant morbidity and mortality. In 2019 the Connecticut Department of Public Health deemed candidemia a mandatory reportable condition and began state-wide surveillance in conjunction with the CDC's Emerging Infections Program (EIP). Previously, the EIP had conducted population-based statewide surveillance of candidemia in Connecticut from 1998 to 2000, allowing an opportunity to assess how the epidemiology of candidemia has evolved. The goal of this study is to compare state-wide Connecticut EIP candidemia data from 2 periods (1998–2000 and 2019) to identify trends in infections and incidence, providing insight for potential improvements to current prevention measures and treatments. **Methods:** The sample population included all Connecticut residents aged ≥20 who tested positive for a candidemia infection during 1998–2000 and 2019. Patients who had positive blood cultures for *Candida* spp but were < 20 years old or were not Connecticut residents were excluded. Connecticut EIP candidemia case report forms from each time period were compared and matching fields were chosen as variables for univariate analysis to search for statistically significant differences. Selected variables include: Candida species present in blood culture, patient demographics, previous exposures to healthcare settings, length of stay, presence of central venous catheter (CVC), and location of the patient at diagnosis (community vs. hospital onset). De-identified patient-level information was provided by the EIP. **Results:** In total, 381 candidemia episodes from 1998–2000 were compared to 247 episodes in 2019. The proportion of *C. albicans* species in 1998–2000 was 49.9% and declined to 40.5% of cases in 2019 (P = .02). Outcomes improved as well, with 65.2% of patients in 2019 having survived compared to 51.4% in 1998–2000 (P = .001). Other findings indicate that patients with candidemia in 2019 were less likely to have a central venous catheter, less likely to have undergone a recent surgery, and were more likely to have community-onset infection (all $p < 0.05$). **Conclusions:** The epidemiology of candidemia has changed over the past 20 years, with significant improvements in patient survival and a shift toward community-onset infections and non-

Table 1.

		YEAR		
		1999 - 2000	2019	Chi-Square P-Value
Candida species present in blood culture	C. albicans	190 (49.9%)	100 (40.5%)	0.021
	Non- C. albicans	191 (50.1%)	147 (53.8%)	
	Total	381	247	
Patient Outcome	Died	185 (48.6%)	86 (34.8%)	0.001
	Survived	196 (51.4%)	161 (65.2%)	
	Total	381	247	
Length of Stay	< 21 days	173 (45.4%)	140 (56.7%)	0.006
	≥ 21 days	208 (54.6%)	107 (43.3%)	
	Total	381	247	
Surgery 3 months preceding culture	No	176 (46.2%)	180 (72.9%)	<0.001
	Yes	205 (53.8%)	67 (27.1%)	
	Total	381	247	
Did the patient have a catheter at time of candidemia episode	No	26 (6.8%)	118 (47.8%)	<0.001
	Yes	355 (93.2%)	129 (52.2%)	
	Total	381	247	
Hospital ward of patient at time of candidemia episode	Inpatient	367 (96.3%)	195 (78.9%)	<0.001
	Outpatient	14 (3.7%)	52 (21.1%)	
	Total	381	247	
Time from admission to culture	< 17 days	255 (66.9%)	194 (78.5%)	0.002
	≥ 17 days	126 (33.1%)	53 (21.5%)	
	Total	381	247	
Number of comorbid conditions	< 3 conditions	91 (23.9%)	159 (64.4%)	<0.001
	≥ 3 conditions	290 (76.1%)	88 (35.6%)	
	Total	381	247	
Sex	Female	180 (47.2%)	101 (40.9%)	0.118
	Male	201 (52.8%)	146 (59.1%)	
	Total	381	247	
Age	20-44	50 (13.1%)	38 (15.4%)	0.425
	Other	331 (86.9%)	209 (84.6%)	
	45-64	100 (26.2%)	80 (32.4%)	0.096
	Other	281 (73.8%)	167 (67.6%)	
	65+	231 (60.6%)	129 (52.2%)	0.038
	Other	150 (39.4%)	142 (48.6)	

Albicans spp. These findings have important implications in designing prevention strategies and optimizing candidemia management, particularly in the community setting where increased intravenous drug use and the availability of home healthcare may be important factors.
Funding: No
Disclosures: None
Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s79–s80
doi:10.1017/ash.2021.156

Presentation Type:
Poster Presentation
Subject Category: VAE
Does a Starting Positive End-Expiratory Pressure of 8 cm H_2O Decrease the Probability of a Ventilator-Associated Event?
William Barnett; Zachary Holtzapple and Ragheb Assaly

Background: Mechanical ventilation is commonly seen in critical ill patients. The vulnerability of these patients is high, and a wide range of associated conditions can stem from this intervention. To objectively identify nosocomial respiratory conditions and provide conformed surveillance definitions of these events, the Centers for Disease Control and Prevention (CDC) established the ventilator-associated event (VAE) criteria. They denote 3 categories of increasing progression in mechanically ventilated patients from a ventilator-associated condition (VAC) to an infection-related ventilator-associated complication (IVAC) and finally to a possible ventilator-associated pneumonia (PVAP). Manipulation of ventilator settings, such as starting on higher values to not trigger VAC criteria, has been criticized by some experts as not only 'gaming the system,' but potentially harming patients. In October 2018, our institution began a baseline of 8 cm H_2O as the starting positive end-expiratory pressure (PEEP) protocol for mechanical ventilation but exempting neurosurgical patients. We sought to determine whether an 8 PEEP protocol is an effective strategy for reducing VAEs in our institution. **Methods:** We retrospectively examined patient data at our institution from January 2014 through February 2020. VAEs were separated by VAC only and IVAC positive (+), which are a combination of IVACs and PVAPs. Using the days between VAEs, a daily event probability can be calculated based on the geometric distribution. Furthermore, as VAEs occur, the likelihood of the event can be assessed as expected or unexpected using a strict probability limit of 0.99865 to reduce type 1 errors. **Results:** In total, 307 patients were identified in our hospital's VAE surveillance. Of those, 180 met CDC-defined VAC-only criteria, and 127 patients met IVAC+ definitions. After implementation of an 8-PEEP protocol, the daily event probability for VACs decreased from 0.083 to 0.047. The last event occurred 162 days after the previous VAC, which was unexpected, because the probability of occurrence extended beyond the probability limit. With regard to IVAC + events, the daily event probability decreased from 0.057 to 0.039 without significant reduction in the IVAC+ rate. **Conclusions:** Although a change in the VAC-only rate occurred, signified by a longer time between events, it took more than a year to achieve in our institution. Additionally, we did not see a reduction in the IVAC+ rate. These findings suggest that an 8-PEEP protocol may be able to reduce VAEs due to noninfectious etiologies, such as congestive heart failure and atelectasis.
Funding: No
Disclosure: None
Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s80
doi:10.1017/ash.2021.157

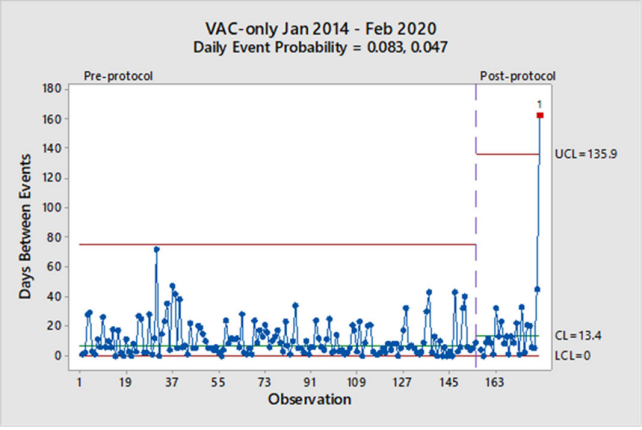

Figure 1.

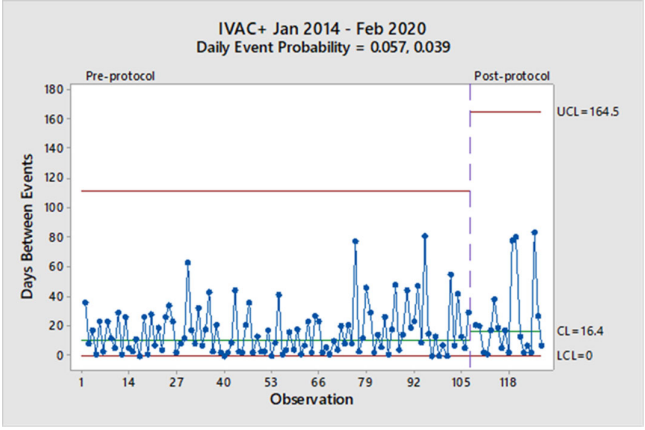

Figure 2.

Presentation Type:
Poster Presentation
Subject Category: VAE
Knobmanship: Dialing Up Understanding of VAE Triggers
Kelly Cawcutt; Mark Rupp and Lauren Musil

Background: Mechanical ventilation is a lifesaving therapy for critically ill patients. Hospitals perform surveillance for the NHSN for ventilator-associated events (VAE) by monitoring mechanically ventilated patients for metrics that are generally thought to be objective and preventable and that lead to poor patient outcomes. The VAE definition is met in a stepwise manner; initially, a ventilator-associated condition (VAC) is triggered with an increase in positive end-expiratory pressure (PEEP, >3 cm H_2O) or fraction of inspired oxygen (FIO_2, 0.20 or 20 points) after a period of stability or improvement on the ventilator. We believe that many reported VAEs could be avoided by provider and respiratory therapy attention to "knobmanship." We define knobmanship as knowledge of the VAE

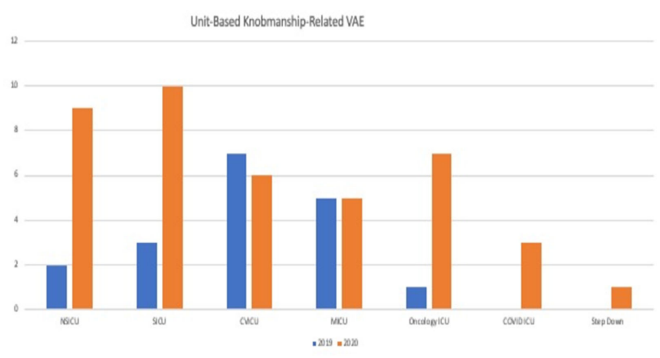

Figure 1.